7. (New) In a BAYER circuit including a preliminary agglomeration phase, a crystal growth phase and a classification phase, a process for controlling precipitation in which particle size quality of alumina hydrate produced in the circuit and circulating in feed tanks is monitored, comprising the steps of:

a) a calibration step including:

a1) measuring, versus time, of:

cumulative percentage of alumina hydrate particles circulating in the feed tanks in the circuit that are finer than X2 um, defined as CPFT X2; and

cumulative percentage of alumina hydrate particles circulating in the feed tanks in the circuit that are finer than X1 um, defined as CPFT X1;

where X1 and X2 are predetermined particles sizes and X1 is smaller than X2; and

a2) determining a relationship R between CPFT X1 and later changes in CPFT X1, and defining upper and lower trigger thresholds of CPFT X1 which correspond to maximum permissible variations in CPFT X2; and

b) controlling the circuit, comprising regularly measuring CPFT X2 and regularly updating a correlation between CPFT X2 and the particle size of hydrate produced by the circuit, regularly measuring CPFT X1 and a regularly updating

of the relationship R, and causing corrective action to the slurry at the beginning of precipitation when the measured value of CPFT X1 reaches one of the regularly updated trigger thresholds.

8. (New) Process according to claim 7, wherein said corrective action includes modification of solid content in the slurry at the beginning of the precipitation.

9. (New) Process according to claim 8, wherein the modification in the solid content in the slurry at the beginning of the precipitation is achieved by modifying proportions of aliquots of pregnant aluminate liquor feeding a first agglomeration tank and a first feed tank, respectively.

10. (New) Process according to claim 7, wherein X2 is greater than 40 μm and X1 is less than 20 μm.

11. (New) Process according to claim 7, wherein the measurements of CPFT X1 μm and CPFT X2 μm are made on a slurry at the end of crystal growth phase.

12. (New) Process according to claim 7, wherein pregnant aluminate liquor feeding a first agglomeration tank in the circuit has a caustic content less than or equal to 160 g of Na$_2$O/liter.

13. (New) Process according to claim 7, wherein said calibration step comprises:

1) daily measuring CPFT X1 in the slurry at a particular

point in the precipitation system, which is used to produce a first particle size vs. time diagram represented by a curve Y = %<X1(t).

2) daily measuring CPFT X2 in the slurry at a particular point in the precipitation system, which is used to produce a second particle size vs. time diagram represented by a curve Y = %<X1(t) and in which X2 is a value already known for its good correlation with the particle size of the hydrate produced;

3) creating of an empirical relation between the particle size vs. time diagrams, which characterizes the relation R as:

$$R(\%<X2(t), \%<X1(t-\tau)) = 0$$

where t is the time at which CPFT X2 is measured and $\tau$ is a characteristic time interval estimated by observing an occurrence of a same accidental phenomenon on each curve; and

4) defining a the maximum threshold and the minimum threshold of CPFT X1 obtained from the relation R and a maximum interval of the authorized variation of values of CPFT X2.

14. (New) Process according to claim 13, wherein said controlling comprises:

1) daily measuring CPFT X1 in the slurry at a particular point in the precipitation system, in order to complete the first particle size time diagram represented by the curve Y =

X1(t);

2) daily measuring CPFT X2 in the slurry at a particular point in the precipitation system, in order to complete the first particle size time diagram represented by the curve Y = X2(t);

3) regular updating of R and the definition of trigger thresholds of CPFT X1, or updating after an important modification in a process parameter; and

4) triggering of a corrective action in the slurry at the beginning of the precipitation when the measured value of CPFT X1 reaches one of the thresholds defined in 3).